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STATION NOTES
CENTRAL STATES FOREST EXPERIMENT STATION
COLUMBUS 15, OHIO

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A VOLUME TABLE FOR BLACK WALNUT TREES IN NATURAL STANDS IN IOWA

Diameter breast high outside bark (Inches)	Volume (Doyle Rule) by merchantable height in 16-foot logs						Average top diameter utilized (Inches)	Basis: number of trees
	1/2	1	1-1/2	2	2-1/2	3		
	Board feet	Board feet	Board feet	Board feet	Board feet	Board feet		
15	58	79	93	107	---	---	11.5	1
16	64	94	117	134	154	---	11.8	6
17	70	110	141	164	187	---	12.2	8
18	78	127	164	194	220	---	12.7	20
19	84	143	188	223	252	---	13.1	20
20	92	161	212	254	287	---	13.7	17
21	100	178	238	287	321	355	14.1	25
22	108	198	267	319	357	392	14.4	21
23	118	217	294	353	394	428	14.7	12
24	130	240	322	388	430	467	14.8	9
25	143	262	354	422	470	508	14.8	5
26	157	287	387	459	508	550	14.9	2
27	173	313	420	498	553	594	14.9	7
28	190	343	458	538	597	639	14.9	3
29	211	376	499	582	644	688	14.9	2
30	238	412	548	628	697	743	14.9	---
31	265	457	601	683	754	801	14.9	---
32	297	504	660	742	818	---	15.0	2
Basis (number)	5	37	63	35	13	7	---	160

This table is based on measurements taken on 160 single-stemmed black walnut (Juglans nigra L.) trees in the Iowa River bottoms of Tama County and in Clayton County, Iowa. The trees were felled in commercial cuttings and were utilized to a variable top diameter. Log lengths varied from 4 to 18 feet. Approximately 59 percent of the logs were 4 to 8 feet long, 22 percent were 9 to 10 feet, and 19 percent were 11 to 18 feet. Only one log exceeded 16 feet in length.

The measurements were made in 1945 by personnel of the Timber Production War Project and the Department of Forestry, Iowa State College. The table was prepared at the Central States Forest Experiment Station, Columbus, Ohio, using Girard's form-class taper method. Average taper and volume were computed in terms of eight-foot sections. Table values are 2.5 percent high in the aggregate. Trees forking above breast height and with merchantable material in more than one stem have 8.7 percent more volume than shown in the table.

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L. F. Kellogg, Silviculturist
Ames Branch Station